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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/594,040

09/25/2006

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EXAMINER

MUNOZ, ANDRES F

ART UNIT

PAPER NUMBER

2894

NOTIFICATION DATE

DELIVERY MODE

06/07/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Advisory Action</b> <b>Before the Filing of an Appeal Brief</b>	<b>Application No.</b> 10/594,040	<b>Applicant(s)</b> WADA ET AL.	
	<b>Examiner</b> Andres Munoz	<b>Art Unit</b> 2894	

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 27 May 2010 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 4 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

#### AMENDMENTS

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
- (a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ They raise the issue of new matter (see NOTE below);
- (c) ☒ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Next Page. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
- The status of the claim(s) is (or will be) as follows:
- Claim(s) allowed: \_\_\_\_\_.
- Claim(s) objected to: \_\_\_\_\_.
- Claim(s) rejected: 1-8,10-17.
- Claim(s) withdrawn from consideration: \_\_\_\_\_.

#### AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

#### REQUEST FOR RECONSIDERATION/OTHER

11. ☐ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: \_\_\_\_\_.
12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_
13. ☐ Other: \_\_\_\_\_.

/Kimberly D Nguyen/  
Supervisory Patent Examiner, Art Unit 2894

/Andres Munoz/  
Examiner, Art Unit 2894

Cont. 3 (NOTE)

Re ind. claims 1, 4, 5, 6, 7, 10, 12 and 13, the proposed amendment changes the scope of the claims and any of the dependents thereon. Hence, the proposed amendment would require further consideration and/or search. Moreover, Applicant's arguments are relied on the proposed amendment which has not been entered.

Re ind. claims 7, 10, 12 and 13 (and any dependents thereon), the applicant alleges (pp. 11-12) "With regard to the combination of Hanaoka and Wood, Hanaoka discloses that a hole 4 is maintained (i.e., not filled) in semiconductor device 6 in order to avoid the generation of voids and an unreliable electrical connection. See paragraph [0177]", and, "because the connection disclosed in Wood is predicated on a solid conductive member disposed in opening 28, one of ordinary skill in the art would be discouraged from combining these teachings, as Hanaoka clearly indicates that a solidly filled hole results in undesirable results (i.e., changing the principle of operation)." The examiner respectfully disagrees:

In re with the applicant's interpretation of Hanaoka [0177], it is noted that the cited paragraph recites in part "a solid conductor is not formed by filling a melting material in the through hole 4" and also [0004] "molten solder...reliability in electrical connection is hard to secure", wherein, Hanaoka is disclosing that a molten material is not used to fill said hole, but rather, for example, [0158] "the conductive layer...electroless plating". Hence, Hanaoka does not teach away from filling the hole, but rather, teaches away from using a molten material to fill said hole. It is also noted that Wood discloses for example, [0054] "electroless deposition", as a suitable means for forming a conductive member in a through hole. Hence, the examiner believes the combination of Hanaoka/Wood is proper.

Moreover, in response to applicant's argument that there is no teaching, suggestion, or motivation to combine the references, the examiner recognizes that obviousness may be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988), *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992), and *KSR International Co. v. Teleflex, Inc.*, 550 U.S. 398, 82 USPQ2d 1385 (2007). In this case, Hanaoka discloses a first and second reroute wiring (18) on a first and second surface of a through wiring board (6, opposite sides of board 6. See Figs. 13-14), while Wood discloses the use of a reroute wiring (42B) that comes into contact with an exposed wiring portion of a trough wiring (38B) formed in a through hole (Fig. 3B), wherein, the combination is proper, as addressed above, and furthermore, one of ordinary skill in the art would find obvious to apply the disclosure of Wood to Hanaoka in order to apply the advantages of Wood to both surfaces of Hanaoka, namely, to re-distribute electrical connections and provide alternatives for testing and selectively address active circuitry (Wood, [0055], [0070]).